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Sipperley et al.

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(54) **PORTABLE ADVERTISING PLATFORM**

(71) Applicant: **Freight Train Media LLC**, Cleveland, OH (US)

(72) Inventors: **Raymond P. Sipperley**, Lattingtown, NY (US); **Donald E. MacCord, Jr.**, Fall City, WA (US)

(73) Assignee: **Freight Train Media LLC**, Cleveland, OH (US)

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This patent is subject to a terminal disclaimer.

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(51) **Int. Cl.**

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G09F 13/02	(2006.01)
B61D 3/16	(2006.01)
G09F 21/04	(2006.01)
B61D 15/00	(2006.01)

(52) **U.S. Cl.**

CPC ***G09F 13/02*** (2013.01); ***B61D 3/16*** (2013.01); ***B61D 15/00*** (2013.01); ***G09F 15/0037*** (2013.01); ***G09F 15/0087*** (2013.01); ***G09F 21/04*** (2013.01)

(58) **Field of Classification Search**

USPC 40/588, 589, 590, 601, 612, 624; 105/439, 457, 461; 248/127, 146, 512, 248/539; 256/18, 2, 8

See application file for complete search history.

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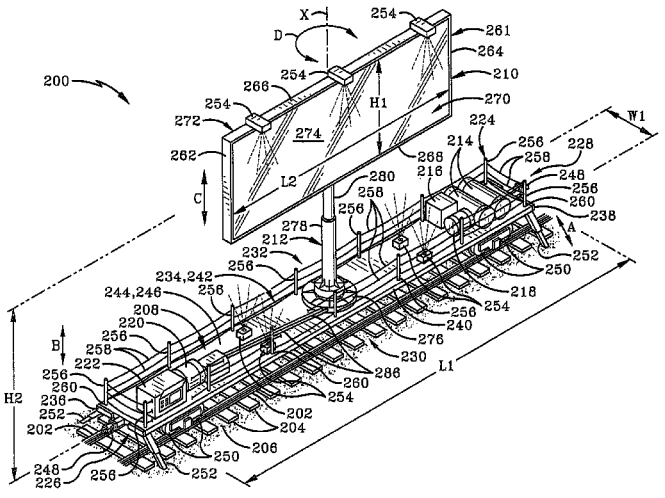
Primary Examiner — Joanne Silbermann
Assistant Examiner — Christopher e Veraa
(74) *Attorney, Agent, or Firm* — Sand & Sebolt

(57) **ABSTRACT**

An advertising system and method of use includes a rail car and an advertising billboard mounted thereon. Preferably, the billboard is adjustable so that advertising thereon can be positioned to face desired viewers, such as people traveling on roadways adjacent a railroad track. The billboard may rotate and/or be raised and lowered by a lift, which may include a telescoping post. An onboard electric power source is typically provided to power lights and other electric components. Outriggers may be used to help stabilize the rail car when parked especially for windy conditions. A security fence may be mounted on the rail car to protect various components thereon. The billboard may include one section which can be raised relative to another section for display purposes and lowered to provide a lower height during transport. The rail car may carry an additional billboard.

20 Claims, 7 Drawing Sheets



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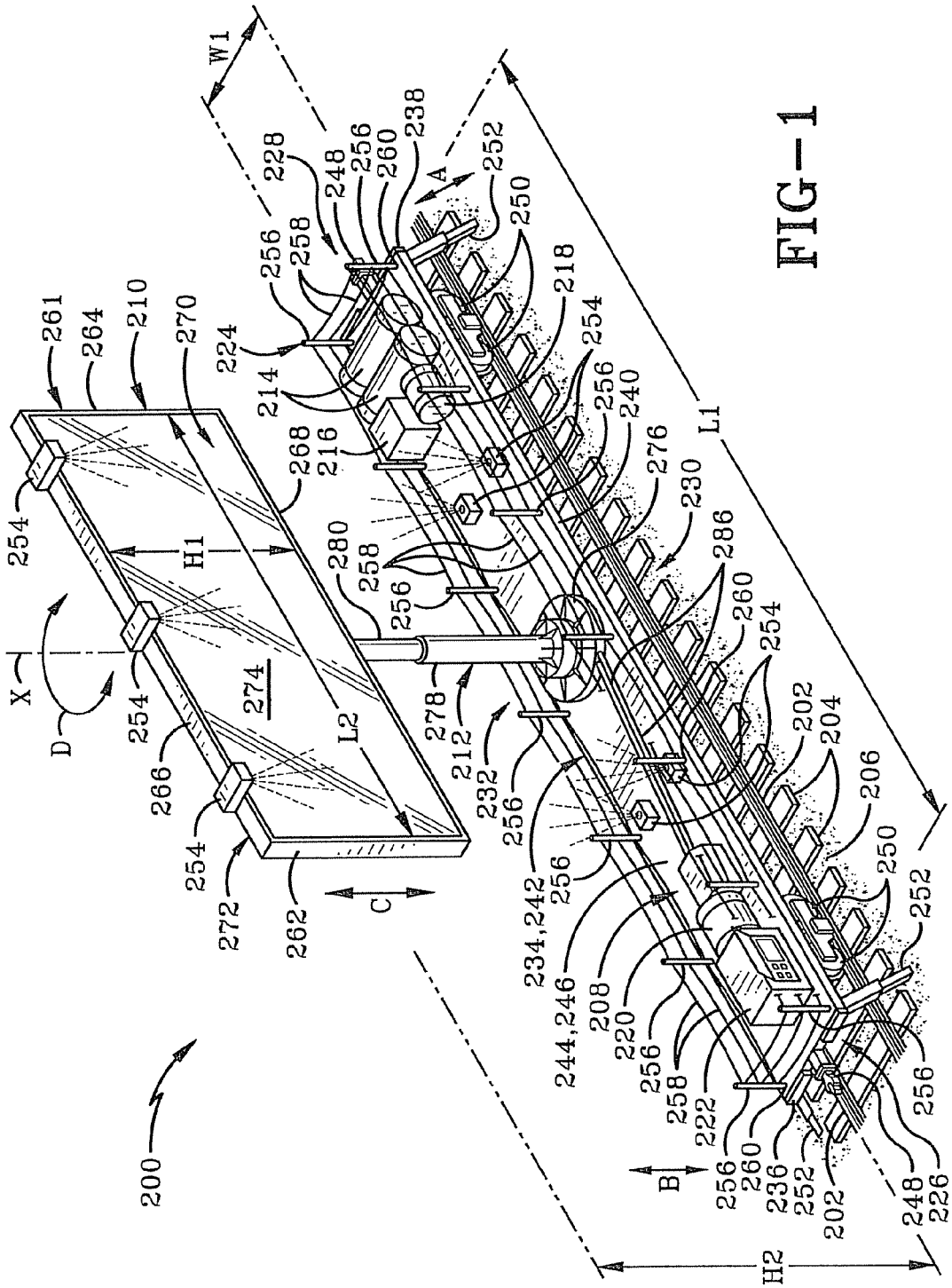
W1
L1
L2
H1
H2
A
B
C
D
X
200
210
214
216
218
220
222
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226
228
230
232
234,242
236
238
240
244,246
248
250
252
254
256
258
260
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266
268
270
272
274
276
278
280
286
202
204
206
208
212

FIG-1

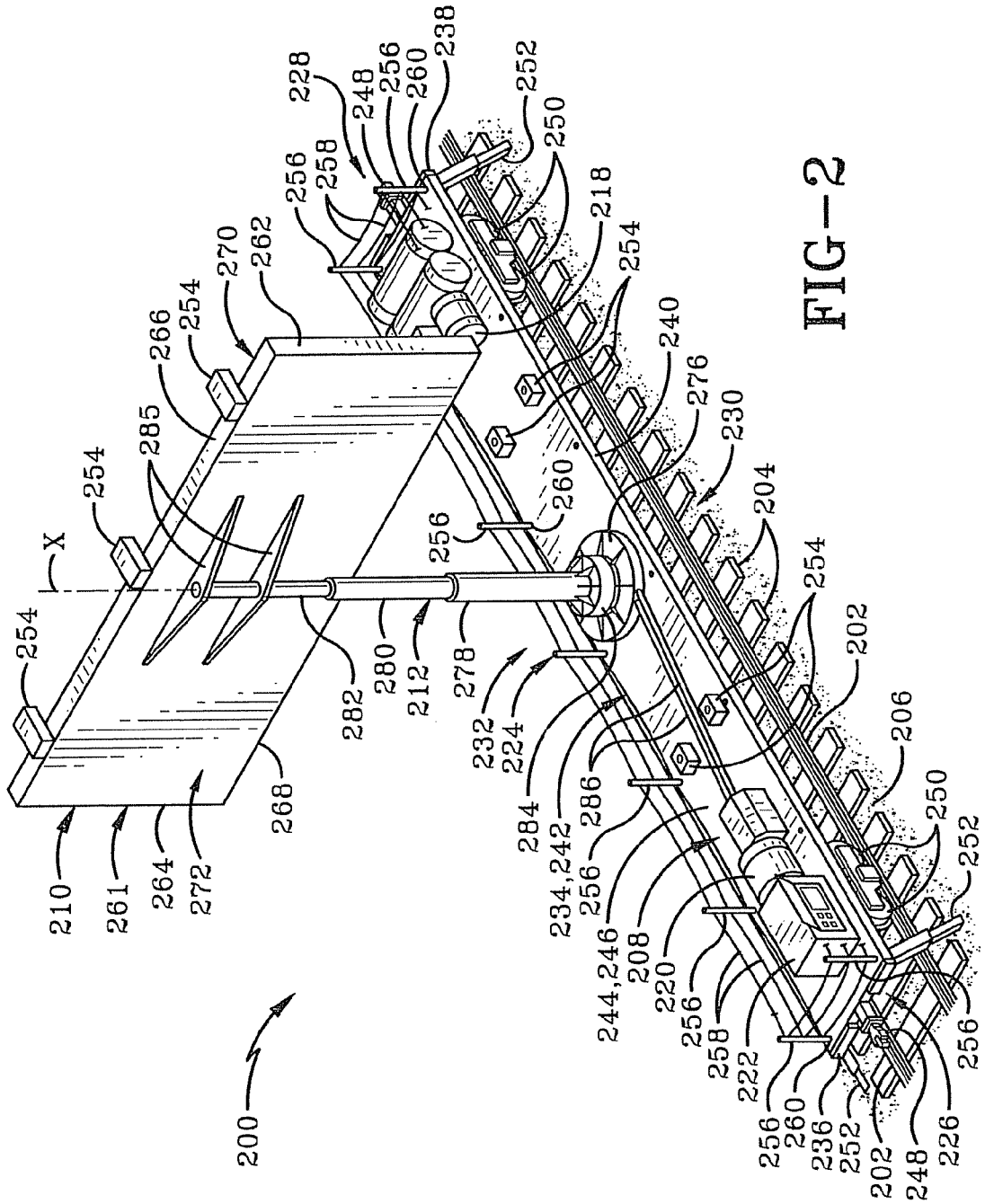

200
210
261
264
272
268
254
X
254
285
266
254
270
262
256
258
228
248
256
260
238
252
250
218
254
240
276
230
204
254
202
206
250
252
256
260
236
252
202
248
226
256
256
258
222
220
208
244,246
234,242
256
286
284
232
224
278
212
280
282
256
260

FIG-2

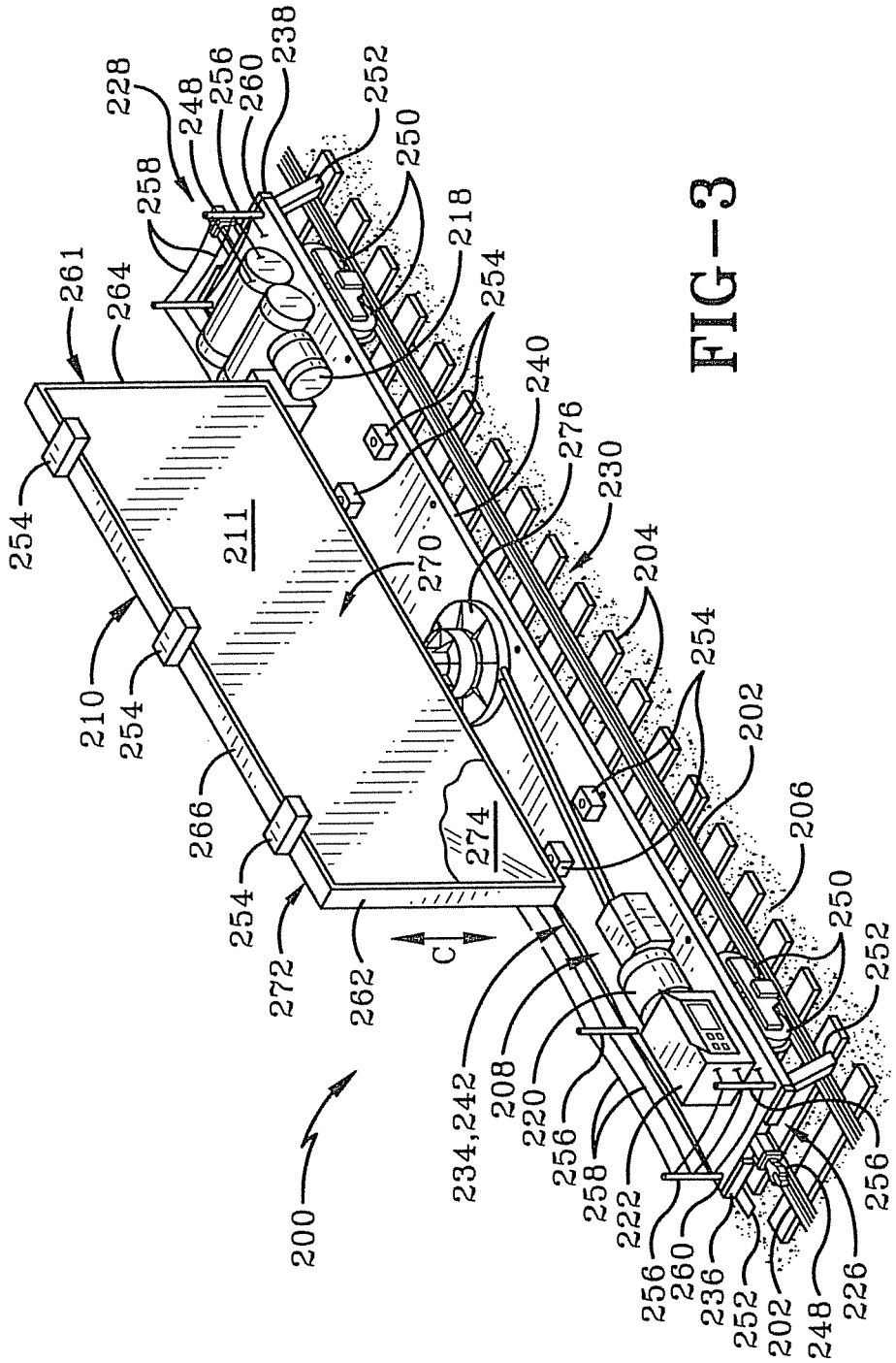
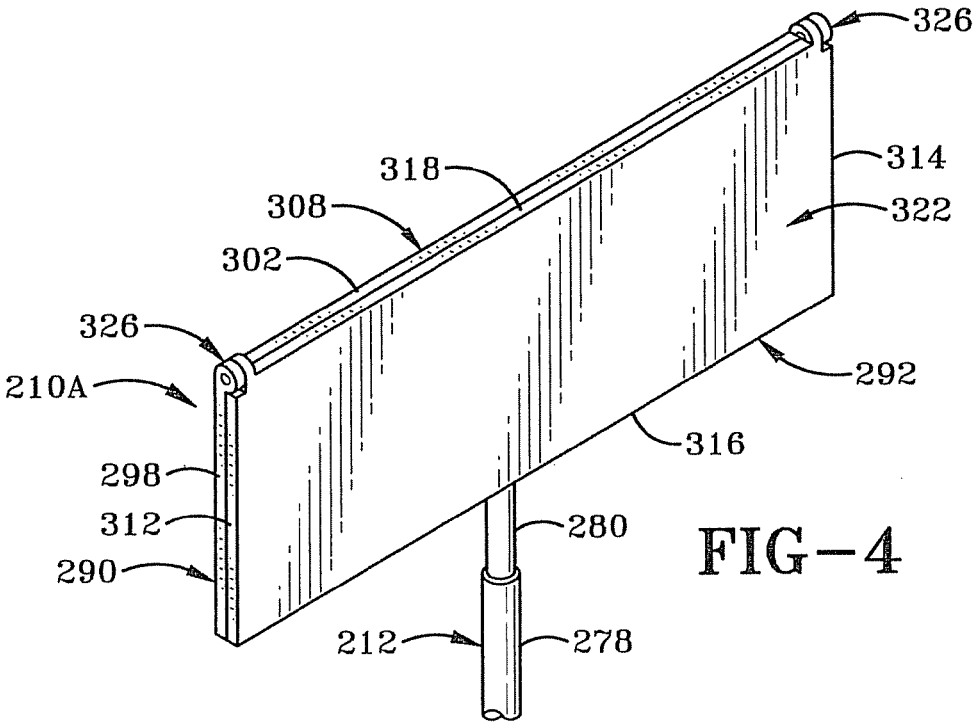
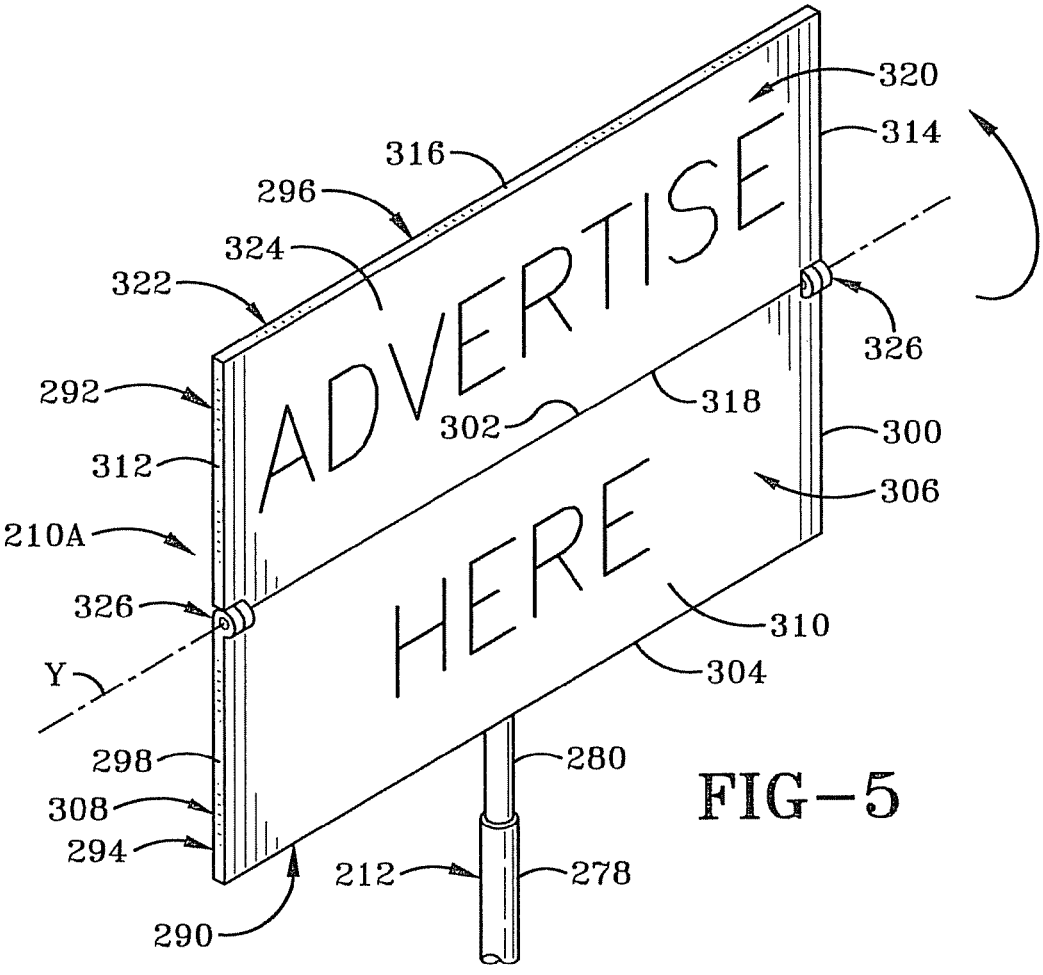

200
210
211
218
228
230
234,242
238
240
248
250
252
254
256
258
260
261
262
264
266
270
272
274
276
202
204
206
208
220
222
226
236
C

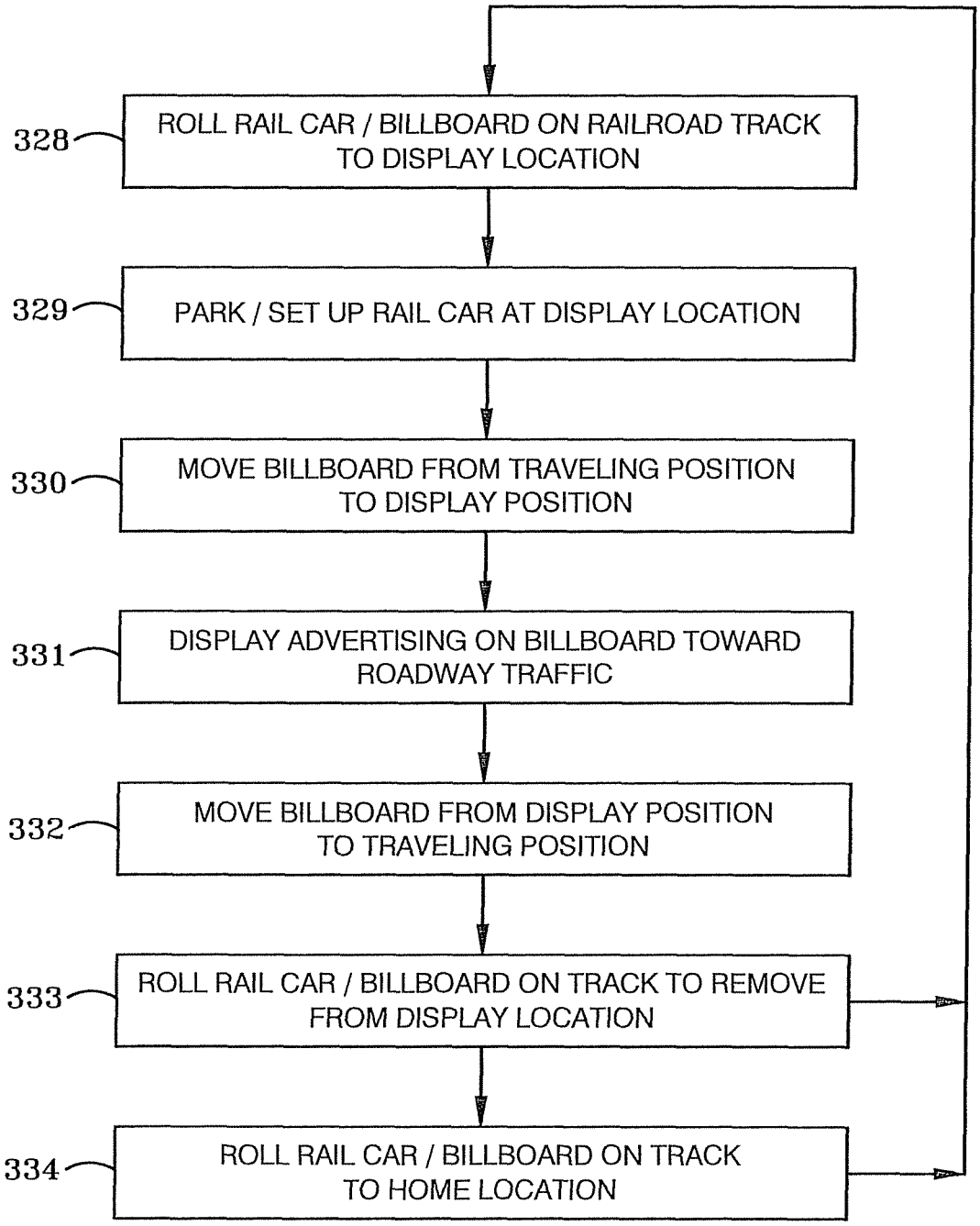
FIG-3


326
314
318
322
308
302
326
210A
292
316
298
312
280
290
212
278

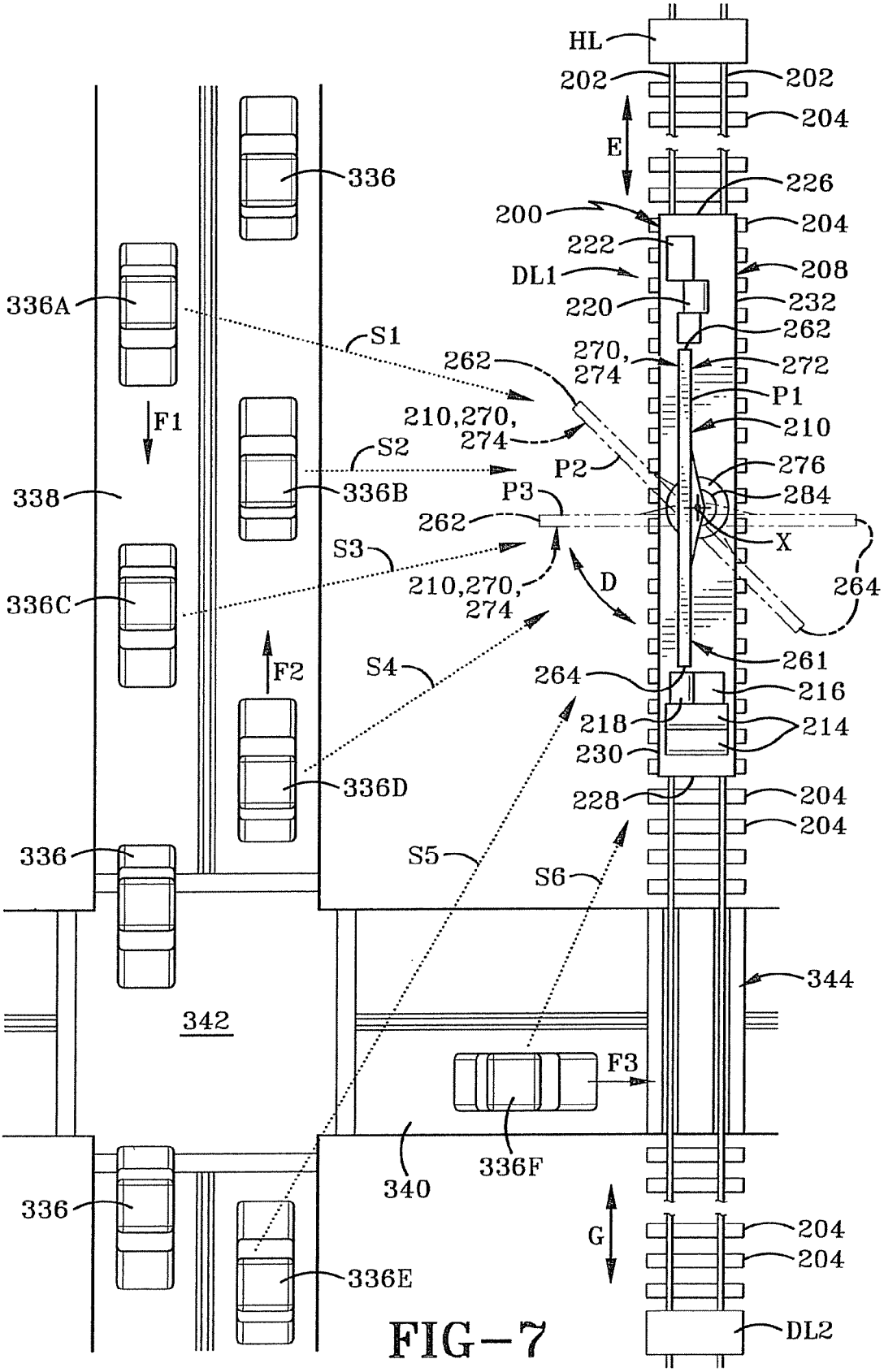
FIG–4


320
314
316
296
324
322
ADVERTISE
326
292
318
302
300
312
306
210A
HERE
326
310
Y
304
298
280
308
294
212
278
290

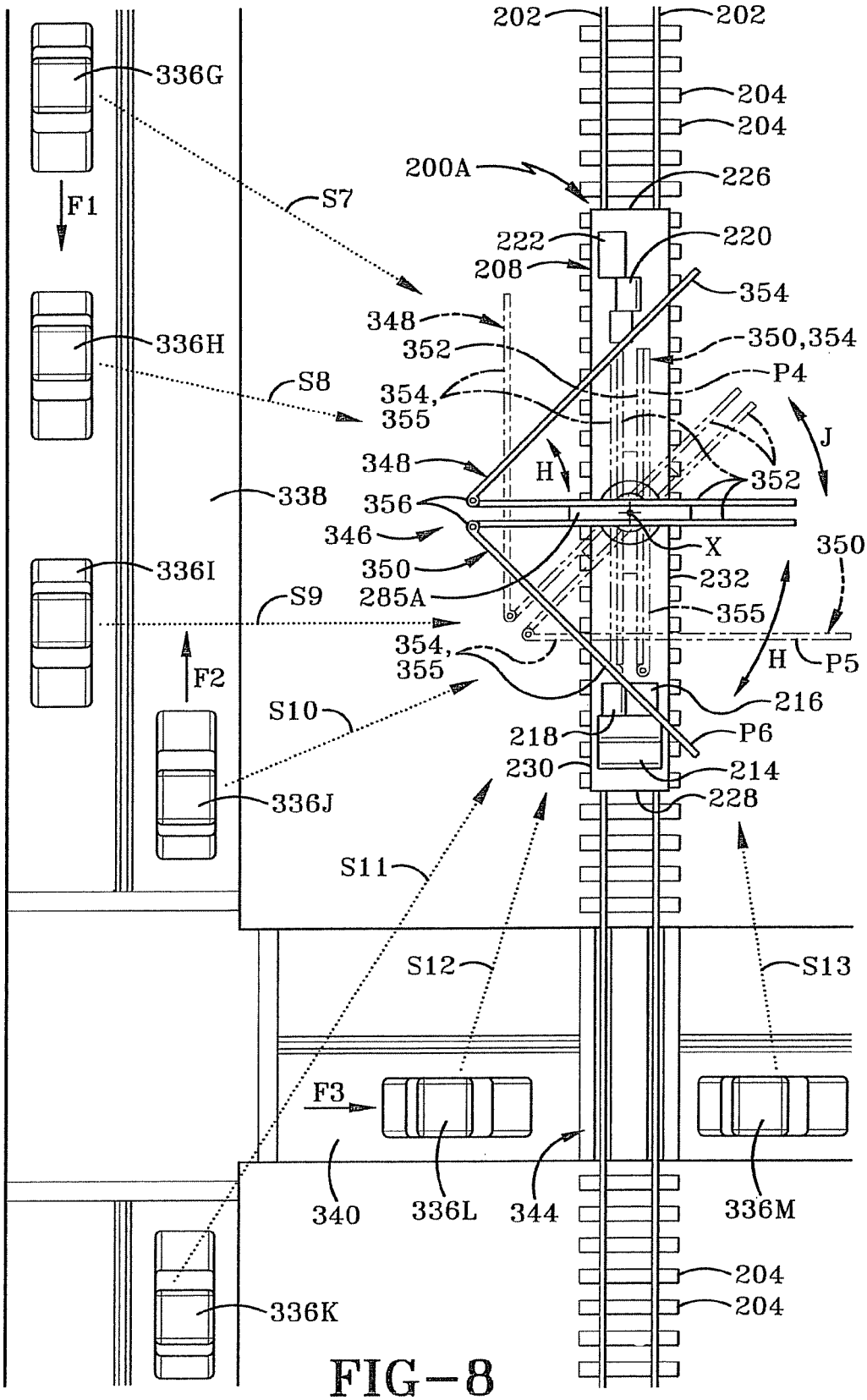
FIG–5


328
ROLL RAIL CAR / BILLBOARD ON RAILROAD TRACK TO DISPLAY LOCATION
329
PARK / SET UP RAIL CAR AT DISPLAY LOCATION
330
MOVE BILLBOARD FROM TRAVELING POSITION TO DISPLAY POSITION
331
DISPLAY ADVERTISING ON BILLBOARD TOWARD ROADWAY TRAFFIC
332
MOVE BILLBOARD FROM DISPLAY POSITION TO TRAVELING POSITION
333
ROLL RAIL CAR / BILLBOARD ON TRACK TO REMOVE FROM DISPLAY LOCATION
334
ROLL RAIL CAR / BILLBOARD ON TRACK TO HOME LOCATION

FIG–6


HL
202
202
204
E
226
200
204
222
208
DL1
220
232
262
270,
274
272
P1
210,270,
274
210
S1
262
S2
P2
276
336A
F1
338
336B
P3
284
262
X
S3
210,270,
274
D
264
336C
F2
S4
261
264
216
218
214
230
228
204
204
336D
336
S5
S6
344
342
F3
336F
340
336
G
204
204
336E
DL2

FIG—7


202
202
336G
204
204
200A
226
F1
S7
222
220
208
354
348
350,354
352
P4
336H
S8
354,
355
J
348
H
352
338
356
346
X
350
350
232
336I
S9
285A
355
354,
355
H
P5
F2
216
S10
218
P6
230
214
336J
228
S11
S12
S13
F3
340
336L
344
336M
204
204
336K

FIG–8

PORTABLE ADVERTISING PLATFORM

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. patent application Ser. No. 12/842,110, filed Jul. 23, 2010; the disclosure of which is incorporated herein by reference.

BACKGROUND OF THE INVENTION

1. Technical Field

The present invention relates generally to portable advertising billboards. More particularly, the present invention relates to a railway vehicle which is configured to travel along a railroad track and carry a billboard to an advertising location typically adjacent a roadway traveled by automobiles and the like. Specifically, the invention relates to such a vehicle and a method of using the same wherein the billboard is in a traveling position during travel along the railroad track and in a display position when the vehicle is at the advertising location.

2. Background Information

Stationary advertising billboards are well known, and are utilized along various types of roadways. Various types of portable advertising have also been used on railway cars and trolley cars in order to display advertising as the cars are traveling. The railroad tracks which crisscross the United States and various other countries are quite extensive. However, not all of these tracks are actively used. In addition, some of the tracks are used only infrequently. However, many of these tracks intersect, cross over, cross under or run adjacent roadways which are reasonably heavily traveled by cars and trucks. Thus, these unused or under-used tracks present locations which are highly suited to advertisement to people traveling in cars and trucks along these roadways. The present invention provides a railway vehicle and method of taking advantage of these locations for the purposes of advertising.

BRIEF SUMMARY OF THE INVENTION

In one aspect, the invention may provide an advertising system for use on a railroad track, the system comprising: a railcar having a deck area and track-engaging wheels adapted to roll on the railroad track; an advertising billboard mounted on the railcar above the deck area; a security fence which extends around the deck area to deter trespassers; and at least one locking mechanism securing the fence to the railcar so that the fence cannot be removed from the railcar without the use of a key configured to unlock the at least one locking mechanism.

In another aspect, the invention may provide an advertising system for use on a railroad track, the system comprising: a railcar having a deck area and track-engaging wheels adapted to roll on the railroad track; an advertising billboard mounted on the railcar above the deck area; a security fence which extends around the deck area to deter trespassers and comprises a plurality of fence posts removably mounted on the railcar; and a plurality of locking mechanisms which respectively secure the posts to the railcar so that the fence posts cannot be removed from the railcar without the use of a key configured to unlock the respective locking mechanism.

In another aspect, the invention may provide a method comprising the steps of: displaying advertising on a billboard above a deck area of a railcar on a railroad track; deterring trespassers from gaining access to the deck area with a security fence which extends around the deck area; and unlocking at least one locking mechanism with a key to allow at least a portion of the fence to be detached from the railcar.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

A preferred embodiment of the invention, illustrated of the best mode in which Applicant contemplates applying the principles, is set forth in the following description and is shown in the drawings and is particularly and distinctly pointed out and set forth in the appended claims.

FIG. **1** is a perspective view of the first embodiment of the portable advertising system of the present invention with the billboard in the raised position.

FIG. **2** is a perspective view similar to FIG. **1** with the billboard in a raised position and rotated 90° relative to the position of FIG. **1**.

FIG. **3** is similar to FIGS. **1** and **2** and shows the billboard in the lowered traveling position with the protective cover mounted thereon.

FIG. **4** is a perspective view of a second embodiment of the billboard with the raise-able section of the billboard in its lowered position.

FIG. **5** shows the raise-able section of the billboard in its raised position.

FIG. **6** is a flow chart showing the general method of advertising of the present invention.

FIG. **7** is a diagrammatic top plan view showing the railcar parked at a display location adjacent roadways with one position of the billboard illustrated in solid lines and two additional positions of the billboard illustrated in dot-dash lines and various lines of sight illustrated by dotted line arrows corresponding to the different positions from which people within cars or trucks on the roadway may view the advertising on the billboard.

FIG. **8** is similar to FIG. **6** and shows the use of an alternate billboard configuration.

Similar numbers refer to similar parts throughout the drawings.

DETAILED DESCRIPTION OF THE INVENTION

The advertising vehicle of the present invention is shown generally at **200** in FIG. **1**. Vehicle **200** is configured for travel along a railway which includes a railroad track comprising a pair of parallel rails **202** secured to railroad ties **204** which are embedded in a railroad bed **206** of the railway. Vehicle **200** includes a flatbed railcar **208** and a billboard **210** which is mounted on railcar **208** by a vertical support post **212**. An onboard independent power generation source includes one or more fuel tanks **214**, a fuel powered engine or motor **216** which is powered by fuel within tanks **214**, and an electric generator **218** which is driven by motor **216** to produce electrical power. The fuel within tanks **214** is typically diesel fuel or gasoline. In addition, the power generation source may include solar panels configured to produce electric power. Alternately or in combination, a plug-in device may be utilized in order to take advantage of any off-board electrical power source which may be adjacent the advertising location at which vehicle **200** may be ultimately utilized. A drive mechanism **220** such as a hydraulic pump assembly is mounted on railcar **208** and operatively connected to billboard **210** and post **212** to drive movement of these components. Drive mechanism **220** is in electrical communication with generator **218** or other electric power source. A protective cover **211** (FIG. **3**) may also be used to help protect the display section of billboard **210** during travel along the rail-

road track. A control unit **222** is also carried by railcar **208** for purposes described further below. Vehicle **200** may also include a security fence **224** which extends entirely around the outer perimeter of the flatbed deck of car **208** and thus also around the various components **210**-**222** in order to protect against or provide a deterrent to graffiti and trespassing on the deck area of the railcar to deter trespassers from tampering with and/or damaging the various components of the vehicle **200** within fence **224**.

Vehicle **200** has first and second ends **226** and **228** defining therebetween a longitudinal direction of the vehicle which is generally parallel to the direction of travel along the railroad track and thus parallel to rails **202**. Vehicle **200** also has first and second sides **230** and **232** defining therebetween an axial direction of vehicle **200** which is generally perpendicular to the direction of travel and rails **202**. Railcar **208** includes a flatbed **234** having first and second ends **236** and **238** defining therebetween a length L1 which is typically in the range of about 53 to 89 feet. Flatbed **234** has first and second sides **240** and **242** defining therebetween a width W1 which is typically on the order of about 9 feet. Length L1 and width W1 are within any applicable governmental or industry standards required. Flatbed **234** is a substantially flat and horizontal rigid structure which is rectangular as viewed from above. Flatbed **234** includes a rigid frame typically formed of metal and a flat rectangular deck **244** having a horizontal upwardly facing top surface **246** which is exposed to the outdoor or ambient atmosphere or air, and thus outdoor weather conditions. Thus, railcar **208** typically is free of a roof extending over the flatbed and is likewise free of solid walls extending upwardly from the flatbed with which a roof would define a fully enclosed cargo hold or passenger compartment.

Couplers **248** are respectively secured to the flatbed adjacent ends **236** and **238** and extend outwardly therefrom. Each coupler **248** is in the form of a universal attachment system for securing the railcar to another railcar, typically a powered railcar configured to push or tow vehicle **200** along the railroad track. Four sets of track-engaging or rail-engaging wheels **250** are mounted on flatbed **234** via suitable suspension assemblies. In particular, two of these sets are adjacent first end **236** and respectively engage the pair of rails **202**, and the other two sets are respectively adjacent second end **238** and respectively engage the pair of rails **202**. Vehicle **200** is thus configured to roll along the rails **202** of the railroad track on wheels **250**. Typically, vehicle **200** is not a self-driving vehicle and thus typically does not include an engine or transmission for driving wheels **250**, which are thus non-driving wheels. Stabilizers or outriggers **252** are mounted on flatbed **234** and are moveable between raised and lowered positions so that vehicle **200** is suited for travel along the railroad track when outriggers **252** are raised, and vehicle **200** is in a stationary position or parked when outriggers **252** are lowered to engage railroad bed **206** to provide additional stability to the vehicle, as may be needed for windy conditions. Outriggers **252** are thus out of contact with the ground or any portion of the railway in the raised position. Arrow A illustrates the movement of each outrigger **252** between its raised and lowered positions. Drive mechanism **220** may be operatively connected to outriggers **252** to drive their movement between raised and lowered positions. However, an alternate drive mechanism may be used for this purpose, including an electric motor drive mechanism or a hand operated drive mechanism which may, for example, use a threaded engagement between an upper and lower section of the outrigger. Outriggers **252** are shown adjacent both sides **240** and **242** of the railcar as well as adjacent the first and second ends **236** and **238** thereof. Preferably, at least a pair of outriggers **252** are carried by the car respectively adjacent sides **240** and **242**.

Depending on the specific type of billboard used on vehicle **200**, lights **254** may be mounted on railcar **208** and/or on billboard **210** such that when illuminated, the light emitted therefrom shines onto the advertisement portion of the billboard. When such lights are used, they are powered by generator **218**, or the other power sources described earlier. In addition, such lights are typically in electrical or other communication with control unit **222**, which may include a timer or light sensor for sensing the ambient light in order to control when lights **254** are turned on and off.

Security fence **224** includes a plurality of fence posts **256** which are secured to extend upwardly from flat bed **234** along its outer perimeter. Thus, there are typically fence posts **256** adjacent the corners formed at the intersection of end **236** and sides **240** and **242**, as well as adjacent the corners formed at the intersection of end **238** and sides **240** and **242**. In addition, there are typically several longitudinally spaced vertical fence posts **256** along each side **240** and **242**. Additional posts may be used between the corner posts along ends **236** or **238**. Barbed wire **258** is strung between the adjacent fence posts **256** such that the barbed wire extends all the way around the outer perimeter of deck **244** upwardly of flatbed **234** (best shown in FIG. **1** although portions of wire **258** are shown cut away for clarity). Fence **224** may include other components, such as boards or planks extending between posts **256**. Typically, however, barbed wire **258** or other similar structures such as concertina wire or razor wire will be positioned adjacent at least the top of the fence to provide a substantial deterrent to potential trespassers from gaining access to the deck area of the railcar. Typically, fence **224** is detachable from the railcar so that it may be deployed when vehicle **200** is at its advertising location and detached as needed in order to more easily access the flatbed and various components thereon for servicing said components. To ensure the integrity of fence **224** when it is deployed, locking mechanisms **260** may be used to secure respective posts **256** adjacent their lower ends to flatbed **234** so that fence posts **256** cannot be removed from the railcar without the use of a key configured to unlock the respective locking mechanism. Arrow B illustrates the mounting or attachment as well as the dismounting or detachment of fence posts **256**, along with wire **258**, from the railcar.

Billboard **210** is a large flat rectangular structure which is substantially vertical. Billboard **210** has first and second vertical edges **262** and **264** defining therebetween a longitudinal direction of the billboard. Billboard **210** has a horizontal top or top edge **266** and a horizontal bottom or bottom edge **268** which extend respectively from first edge **262** to second edge **264**. Billboard **210** also has a first or display side **270** and a second opposed side **272** which may be a non-display side or may be configured as a display side such that the display sides are configured to display advertising thereon. Each of sides **270** and **272** are flat and substantially vertical and rectangular as viewed when facing the respective side. Billboard **210** includes a rigid billboard frame **261** which is typically made primarily of metal. An advertising display section **274** is mounted on display side **270** of frame **261** and is configured for displaying advertising thereon. Display section **274** is typically the same size as or nearly the same size as first display side **270**. First and second ends or edges **262** and **264** define therebetween a horizontal length L2 which may vary substantially. The industry standard for the length of stationary billboards which are permanently anchored to the ground is about 48 feet, and length L2 may be on this order. Top and

bottom edges **266** and **268** define therebetween a vertical height H1 which again may vary although the industry standard for stationary billboards is about 14 feet, and height H1 may be on this order. Frame **261** and display section **274** thus have respective heights and lengths which are approximately represented by height H1 and length L2. Display section **274** may be any suitable display section which allows for advertising to be displayed thereon. Thus, a flexible sheet of material may serve as the advertising display section **274** where various advertising words and/or images are depicted thereon in any suitable fashion. Such a sheet of material may be formed of vinyl or other suitable materials. When vinyl or the like is used, lighting assemblies **254** are also typically used and positioned in order to focus their light during illumination onto display section **274** when lighting is needed or desired. Display section **274** may also be formed of multiple LEDs (Light Emitting Diodes) or may use a digital display, a plasma screen, or any other suitable display section. Billboard **210** in its entirety is vertically moveable in a linear fashion (Arrow C) upwardly and downwardly between a raised and a lowered position. In addition, billboard **210** in its entirety is rotatable about vertical axis X, which is the central axis of post **212**.

As previously noted, protective cover **211** may be used to cover display section **274** during the transport of the railcar along the railroad track. FIG. **3** illustrates cover **211** in a covered position in which it entirely covers display section **274**. Thus, cover **211** is approximately the same height H1 and length L2 of billboard **210**, and has top and bottom horizontal edges which are at approximately the same height as top and bottom edges **266** and **268** and extend along the entire length thereof, as well as vertical opposed edges which are respectively adjacent side edges **262** and **264** and extend along the entire height thereof. Cover **211** may be formed of any suitable material, such as one or more sheets of plywood, a combination of boards which are laid adjacent one another, one or more sheets of aluminum or the like. Cover **211** is most commonly used when display section **274** includes LEDs, a digital display, plasma screen, or the like where the protection of such display sections is desirable. Cover **211** is secured to frame **261** of the billboard along its outer perimeter by any fasteners suitable for this purpose. In the exemplary embodiment, cover **211** is entirely removable from the frame of billboard **210** and thus is moveable between the covered position of FIG. **3** and the uncovered or exposing position of FIG. **1** in which cover **211** does not cover display section **274**, which is thus fully exposed.

Support post **212** is a telescoping pole and is part of a lift for raising and lowering billboard **210**. In addition, post **212** is rotatable about vertical axis X whereby billboard **210** rotates therewith. A relatively large rigid base **276** is rigidly secured to the top surface **246** of deck **244** about midway between first and second ends **236** and **238** and extends from adjacent first side **240** to adjacent second side **242**. Post **212** and axis X are substantially equidistant from ends **236** and **238**. In the exemplary embodiment, base **276** includes a substantially flat large metal disk which is oriented horizontally. The telescoping pole **212** includes a lower section or hollow pole **278**, a middle section or pole **280** and an upper section or pole **282** such that middle pole **280** is telescopically received within the hollow pole **278**, and upper pole **282** is telescopically received within middle pole **280** and lower pole **278**. A rigid circular annular flange **284** is rigidly secured to and extends radially outwardly from the bottom of lower pole **278**. Annular flange **284** is rotatably mounted atop base **276** to rotate relative thereto about vertical axis X. Flange **284** is directly above base **276** and rotatably mounted thereon typically by suitable ball bearings or other rollable bearings which roll on base **276** and on which flange **284** rolls during its rotation. Rigid mounting flanges **285** are rigidly secured to the upper pole **282** and extend horizontally outwardly therefrom. Flanges **285** are also rigidly secured to second side **272** of billboard frame **261** in order to fully support billboard **210** in the raised and lowered positions. In the exemplary embodiment, post assembly **212** provides the sole structural support which supports billboard **210** and extends downwardly from the bottom of billboard **210** to the deck or frame work of the flat bed **234**.

Drive mechanism **220** is operatively connected to telescoping pole **212** in order to raise and lower poles **280** and **282** relative to pole **278** in a telescoping fashion, whereby the drive mechanism likewise raises and lowers billboard **210** with upper pole **282**. As previously noted, drive mechanism **220** may include a hydraulic pump assembly. In that case, hydraulic lines **286** are provided which connect the hydraulic pump assembly to the lift or pole **212** in order to drive the upward movement (Arrow C) of the pole and billboard **210** relative to the railcar. Drive mechanism **220** is also configured to drive the rotation of the telescoping pole and billboard relative to base **276** and the railcar. Pole **212** and billboard **210** are thus rotatable about vertical axis X (Arrow D) between a position (FIGS. **1**, **3**) which is substantially parallel to sides **240** and **242** of the railcar to a position (FIG. **2**) which is substantially perpendicular thereto. The pole and billboard may be rotated 90° in either direction from the parallel position in order to provide the desired orientation of advertising display section **274**.

FIG. **3** illustrates billboard **210** in its transport or traveling position, such that billboard **210** is in its lowered position as well as oriented substantially parallel to sides **240** and **242** of the railcar. This orientation minimizes wind resistance which occurs during travel of vehicle **200** along the railway inasmuch as one of the relatively narrow or thin edges **262** and **264** serves as the leading edge during this travel instead of the rather large surface area presented by one of sides **270** or **272**. Billboard **210** is also typically in its lowered position during travel, which also minimizes wind resistance as well as ensures that large billboards stay within the maximum height limitation H2 designated by the Association of American Railroads or other governmental institutions or industry standards. Height H2 is typically on the order of about 18 feet and measured from around the top of one of rails **202**. Thus, the top **266** of billboard **210** is no higher than the maximum height H2 in the lowered position although it is typically higher than the maximum height H2 when in its raised position when vehicle **200** is stationary.

FIGS. **4** and **5** illustrate an alternate embodiment of a billboard **210**A which is mounted in a similar manner on upper pole or segment **280** of post assembly **212** so that billboard **210**A may be raised, lowered, and rotated in the same manner as billboard **210**. However, billboard **210**A includes a first section **290** and a second section **292** which is moveable relative to first section **290** between a collapsed or lowered position (FIG. **4**) and an expanded or raised position (FIG. **5**). As previously noted, there are standards which require that the structures of a railcar or the structures carried by a railcar not exceed height H2 (FIG. **1**). However, some billboards may be too large to meet this requirement even in the lowered position of the lift, such as shown in FIG. **3**. Thus, billboard **210**A allows the billboard to be within the height limitations during travel while exceeding them when the railcar is parked for the purpose of advertising. Thus, the rigid frame of billboard **210**A is formed primarily of a first rigid frame or frame section **294** of first section **290** and a second rigid frame or frame section **296** of second section **292**. Each

of sections **290** and **292**, as well as frames or frame sections **294** and **296** are relatively large rectangular flat structures which in both the collapsed and raised positions are parallel to one another and vertical. In the collapsed position, first and second sections **290** and **292** and their respective frames are generally side-by-side at about the same height whereas section **292** in the raised or expanded position is directly above and extends upwardly from section **290** so that sections **290** and **292** are substantially coplanar. First section **290** and frame **294** have first and second vertical side edges **298** and **300**, horizontal top and bottom edges **302** and **304**, flat vertical first and second rectangular sides **306** and **308** wherein first side **306** is a display side, and an advertising display section **310** mounted on frame **294** on display side **306**. Advertising display section **310** is substantially the same size as frame **294** and is thus flat, vertical, and substantially rectangular. Second section **292** and second frame **296** are similar to section **290** and frame **294**, and thus have vertical first and second opposed edges **312** and **314**, horizontal top and bottom edges **316** and **318** (in the raised position of FIG. **5**), first and second flat rectangular display sides **320** and **322** which are vertical in the raised and collapsed positions, and an advertising display section **324** on display side **320**. In the exemplary embodiment, the frames of the first and second sections **290** and **292** are pivotally connected by hinges **326** and are pivotable about a horizontal axis Y passing through the hinges. Hinges **326** may include a securing mechanism to secure section **292** in the raised position and in the collapsed position if needed. However, other securing mechanisms may be used which are not within the hinges.

In the collapsed position of FIG. **4**, top edge **316** of second section **292** serves as the bottom edge while bottom edge **318** serves as the top edge of section **292**. In the collapsed position, edges **302** and **318** are substantially coplanar and face upwardly while edges **316** and **304** are likewise substantially coplanar and face downwardly. Thus, edge **316** is adjacent and extends along edge **304** in the collapsed position and is spaced downwardly from edge **302**. Edges **298** and **312** in the collapsed position are adjacent one another along their entire length, or height, as are edges **300** and **314**. Display side **320** and display section **324** face and are closely adjacent display side **306** and display section **310** such that the display sides and display sections are superimposed on one another in the collapsed position. In the collapsed position, second sides **308** and **322** are vertical, parallel and face away from one another.

The arrow in FIG. **5** illustrates that section **292** has been flipped up via hinges **326** about axis Y to the expanded or raised position of section **292** so that display sides **306** and **320** are substantially coplanar and face in the same direction. In addition, display section **310** and display section **324** are likewise substantially coplanar and face the same direction whereby the display sections may be combined into a single display section with advertising displayed on both display sections as illustrated in FIG. **5**. In the expanded position, edge **316** faces upwardly and is spaced upwardly from top edge **302** of section **290**. In addition, edge **318** faces downwardly such that edge **318** faces edge **302** with edges **318** and **302** closely adjacent or abutting one another. Edge **312** is vertically aligned with and directly above edge **298** so that together they form a substantially vertical edge along billboard **210**A in the expanded position. Similarly, edge **314** is substantially vertically aligned, coplanar with and directly above edge **300** so that together they form a vertical edge extending from the top to the bottom of billboard **210**A. In the expanded position, edge **316** thus defines the top of the billboard and edge **304** defines the bottom of the billboard. In the expanded position, second side **308** and second side **322** are substantially coplanar and face in the same direction away from the respective display sections and display sides.

The operation and method of advertising in the present invention are now described with primary reference to FIGS. **6** and **7**. FIG. **6** shows the general overall method in blocks **328-334**, which will be explained in greater detail. Once system **200** is ready to be deployed, the railcar and billboard are rolled (Arrow E) along the railroad track from a home location HL (FIG. **7**) to a display location such as display location DL**1** (FIG. **7**), as generally noted at block **328**. The display location is typically relatively remote from the home location although this will vary under the given circumstances. However, the display location or locations may easily be several miles or hundreds of miles from the home location depending on the specific scenario. As previously noted, the railcar typically is not self-powered in order to drive itself along the railroad track and is thus pushed or pulled by a powered railcar from the home location to the display location and otherwise. Thus, the powered railcar may decouple from railcar **234** at the display location and ultimately be used to transport the personnel setting up system **200** at the display location back to the home location or elsewhere. During travel of system **200** from home location HL to display location DL**1**, the billboard and lift are in the travel position or transport position shown in FIG. **3**, which shows that the lift including the telescoping pole and the billboard are in the lowered position and the billboard is substantially parallel to sides **230** and **232** of the railcar as well as parallel to rails **202**. This position thus minimizes wind resistance during travel as well as keeps the billboard within the height limitation H2 (FIG. **1**). In addition, if needed, protective cover **211** will be installed at the home location and remain in the covered or covering position of FIG. **3** during transport to the display location.

Once system **200** has arrived at the display location DL**1**, the railcar is parked and set up, as indicated at block **329** in FIG. **6**. Part of this set-up may involve the deployment of outriggers **252** for windy conditions or if it is otherwise deemed desirable to increase the stability of the railcar. More particularly, outriggers **252** are moved from the raised position of FIG. **3** used during transport of system **200** to the lowered position shown in FIGS. **1** and **2**, whereby outriggers move from a position out of contact with the rail bed into a position in contact with the rail bed to enhance the stability of the railcar. If fence **224** is not set up earlier, it may be deployed at the display location so that posts **256** are secured by locking mechanisms **260** in order to set up the perimeter of the fence along the outer perimeter of the railcar as discussed earlier. If electric power is available adjacent display location DL**1**, the plug-in option discussed earlier may be utilized to access electric power for operating the various electrical components of system **200**. Otherwise, the onboard electrical generation system may be used, such as by beginning operation of motor **216** to power electric generator **218**. Drive mechanism **220** is also started at this point in order to move the billboard from the traveling position to the display position, as noted at block **330**. Drive mechanism **220** thus drives the lifting capability of the lift so that pole **212** telescopes upwardly in order to extend the pole sections **280** and **282** along with billboard **210** from the lowered position of FIG. **3** to the raised position of FIG. **1**. It is noted, however, that where the billboard is at a sufficient height for advertising without being raised, this step of the process may be eliminated. When billboard **210**A (FIGS. **4** and **5**) is used instead of billboard **210**, the step of moving the billboard from the traveling position to the display position additionally

includes flipping section **292** upwardly about axis Y relative to section **290** from the closed or collapsed position of FIG. **4** to the expanded or raised position of FIG. **5**, and also includes the step of securing section **292** in the raised position.

Drive mechanism **220** also drives the rotation of billboard **210** about axis X as desired in order to position the billboard at the desired angle. For instance, FIG. **7** illustrates that billboard **210** may be rotated about axis X from a position P**1** (solid lines) in which billboard **210** is parallel to sides **230** and **232** and rails **202** to a position P**2** or P**3** illustrated in dot-dash lines. Billboard **210** in position P**2** is rotated about 45° from position P**1**, and in position P**3** is rotated about 90° from position P**1**. In position P**1**, billboard **210** (including its sides **270** and **272** and display section **274**) are parallel to rails **202** and sides **230** and **232** as viewed from above. In position P**2**, billboard **210** is at an angle of about 45° relative to rails **202** and sides **230** and **232** as viewed from above. In position P**3**, billboard **210** is at an angle of about 90° relative to rails **202** and sides **230** and **232**. Depending on the specific circumstances, billboard **210** may not need to be rotated from position P**1** (nor raised) and thus may remain in position P**1**, which may be in the raised or lowered positions. Thus, the billboard **210** is positioned as desired in order to display advertising thereon toward roadway traffic, as noted at block **331**. Thus, the position of billboard **10** is selected in accordance with the location of system **200** relative to motor vehicles **336** such as cars or trucks traveling along roadways such roadways **338** and **340**. The position of billboard **210** may also depend on the direction of travel of the motor vehicle traffic. FIG. **7** illustrates that the railroad track is generally parallel to roadway **338** and generally perpendicular to roadway **340**. Roadways **338** and **340** are shown meeting at a crossroads or intersection **342** while the railroad track is shown intersecting roadway **340** at intersection **344**, which may be an actual intersection of the track with the roadway, or an overpass or underpass. FIG. **7** thus illustrates various possibilities of a display location at which system **200** might be used. As FIG. **7** shows, ends or edges **262** and **264** of billboard **210** are directly over railcar **208** in position P**1** while they are not directly over the railcar in positions P**2** and P**3**. Thus, edges **262** and **264** are directly over top surface **246** of deck **244** between sides **230** and **232** in position P**1** and not directly over surface **246** between sides **230** and **232** in positions P**2** and P**3**, but rather extend well beyond sides **230** and **232** respectively.

FIG. **7** illustrates in particular various lines of sight S**1**-S**6** of the people respectively in several of motor vehicles **336** to billboard **210** and in particular, the respective lines of sight from a given person in a vehicle to the display side **270** and display section **274** of billboard **210**. FIG. **7** illustrates to a flow of traffic on roadway **338** at arrows F1 and F2 and also the flow of traffic F3 in one of the lanes of roadway **340**. For two-way traffic such as illustrated on roadway **338**, it may be desired that billboard **210** be in position P**1** such that, for instance, people in vehicles **336**A-**336**D are able to see the advertising on display section **274** regardless of which direction they are traveling on roadway **338**, as illustrated by lines of sight S**1**-S**4**. On the other hand, it may be advantageous to rotate billboard **210** to position P**2** in order to enhance the ability of people in vehicles **336**D-**336**F to better see the advertising on display section **274**, as illustrated at lines of sight S**4**-S**6**. Billboard **210** in position P**3** may be best suited for people in vehicles **336**D and **336**E (lines of sight S**4**-S**5**) such that the display section **274** is substantially perpendicular to the roadway and flow of traffic F2. FIG. **7** thus illustrates that billboard **210** may be positioned parallel, perpendicular, or at another angle such as 45° relative to a nearby roadway and the flow of traffic thereon in order to take best advantage of the specific circumstances. As previously noted, intersection **344** could be an overpass or underpass. In the case that intersection **344** is an overpass, it could also serve as a display location for system **200** so that the billboard **210** could be positioned directly above roadway **340**.

During the display of the advertising on billboard **210** at display location DL**1**, the use of lights **254** may be desired, such as during the nighttime in order to illuminate the advertising section **274**. If lights **254** are mounted on the frame of billboard **210** above or otherwise as illustrated at FIG. **1**, such lights may be used to illuminate display section **274** regardless of whether billboard **210** is in position P**1**, P**2**, or P**3**. However, the lights **254** which are mounted on flatbed **234** may also be used to illuminate display section **274**. More particularly, it may be that only some of lights **254** on flatbed **234** are powered to illuminate display section **274** when it is in a given position P**1** or position P**3** for example. As discussed earlier, control unit **222** may include a timer to control when lights **254** are illuminated or may include a light sensor which turns lights **254** on when it is sufficiently dark outside in accordance with the setting of the light sensor. Control unit **222** may also include various other types of controls for controlling when lights **254** are turned off and on.

As discussed in the Background section of the present application, some railroad tracks are no longer in use and others are used relatively sparingly. In the former case, system **200** could theoretically remain in a display location indefinitely although more likely system **200** would at some point be moved for servicing purposes or to be relocated to another display location. Furthermore, where a railroad track which is being used relatively rarely, system **200** may be set up for a specific duration of time to be used for advertising, but may then be removed in order to allow trains to travel along the railroad track through the display location, after which the system **200** may be returned to the same display location if desired. Regardless of the reason that system **200** would be moved from the display location DL**1**, the next step would be to move the billboard from a display position to the traveling position, as shown in block **332**. When billboard **210**A is used instead of billboard **210**, the step of moving the billboard from the display position to the traveling position also involves releasing the securing mechanism which secures section **292** in a raised position so that section **292** may be moved from the raised position of FIG. **5** to the lowered or collapsed position of FIG. **4**. Thus, if billboard **210** has been raised and/or rotated to a display position while at the display location, it may be lowered and rotated back to the travel position of FIG. **3** in order to prepare for travel of system **200**, and more particularly the rolling of railcar and billboard on the railroad track to remove system **200** from the display location, as noted at block **333**. Depending on the circumstances, removing system **200** from display location DL**1** may involve returning to the home location HL (Arrow E) by rolling the railcar and billboard along the track, as indicated at block **334**. Alternately, system **200** may be rolled along the track from display location DL**1** to a second display location DL**2**, as shown at Arrow G in FIG. **7**. If system **200** does go to another display location, the process begins again so that the railcar is parked on the track and the billboard is moved to the display location for advertising at the subsequent display location. Of course, the system may return to the home location HL and subsequently be deployed to another display location for additional advertising purposes. Furthermore, the home location HL or display location DL**2** shown in FIG. **7** may represent a temporary parking place for system **200** at which the railcar may be parked temporarily off

of the primary railroad track shown in order to allow a train to pass along this railroad track and subsequently allow system **200** to move back to the display location DL**1** for another duration of advertising. Thus, system **200** may be used for several days at a given display location and may subsequently move to another location and return to the same display location to continue advertising there for another several days, for example. On the other hand, system **200** may be used at a display location and then returned to the home location for servicing or other purposes. System **200** may also be moved from the first display location to another display location either directly or indirectly after a return to the home location.

FIG. **8** illustrates an alternate portable advertising system **200**A which is similar to system **200** except that it uses a billboard assembly **346** which includes first and second billboards **348** and **350** which are substantially mirror images of one another. Each of billboards **348** and **350** includes a rigid rectangular primary frame **352** which is generally similar in structure to the frame of billboard **210**. Primary frames **352** are rigidly secured to mounting flanges **285**A (similar to flanges **285** in FIG. **2**), which in turn are rigidly secured to the top segment **280** of the telescoping pole. Each of billboards **348** and **350** also includes a rigid rectangular secondary frame **354** which is substantially the same size as the primary frame **352**. Each secondary frame **354** is pivotally connected to the respective primary frame **352** about a vertical pivot axis of a pivot **356** which is respectively adjacent a vertical edge of the primary frame and vertical edge of the secondary frame opposite the opposed ends of the respective frames **352** and **354**. Arrows H illustrate the pivotal movement of each secondary frame **354** relative to the respective primary frame **352** between an open position shown in solid lines and a closed position (P**4**) which is shown in dot-dash lines in which the primary and secondary frames **352** and **354** are also in the traveling position parallel to the sides **230** and **232** and rails **202**.

The entire billboard assembly **346** and post **212** is rotatable (Arrow J) about axis X, just as is true of the billboard **210** and post **212** of system **200**. More particularly, FIG. **8** illustrates billboard assembly **346** in a first position P**4** in dot-dash lines which illustrates the travel position, a second position P**5** (dot-dash lines) in which the secondary frames **354** are open 45° relative to the primary frames **352** and the entire billboard assembly **346** is rotated 45° relative to position P**4**, and a position P**6** (solid lines) in which the secondary frames **354** are in the open position and the entire billboard assembly **346** is rotated 90° relative to position P**4** and 45° relative to position P**5**. As with billboard **210** of system **200**, the opposed ends of billboards **348** and **350**, including the opposed ends of frames **352** and **354** are directly above the railcar in the travel position P**4**, but are not directly above the railcar in the display positions P**5** and P**6**, but are rather positioned outwardly beyond sides **230** and **232** respectively. Each secondary frame **354** has a display side upon which is mounted an advertising display section **355** analogous to advertising section **274** of system **200**. Display sections **355** in position P**4** are parallel to and face away from one another. Display sections **355** in the open position of secondary frames **354** are at about a 90° angle relative to one another. In position P**5**, frames **352** are at an angle of about 45° relative to rails **202** and sides **230** and **232** as viewed from above. In position P**5**, frame **354** of billboard **348** is parallel to rails **202** and sides **230** and **232** while frame **354** of billboard **350** is perpendicular to rails **202** and sides **230** and **232**. In position P**6**, frames **352** are perpendicular to rails **202** and sides **230** and **232** while frames **354** are respectively at an angle of about 45° relative to rails **202** and sides **230** and **232** as viewed from above.

Similar to FIG. **7**, FIG. **8** illustrates several motor vehicles **336**G-**336**M and the respective lines of sight S**7**-S**13** of the people in these vehicles towards the display sections of billboards **348** and **350**. Billboard assembly **346** is particularly configured to take advantage of advertising to vehicles coming from different directions when in the open position of the secondary frames. For instance, when assembly **346** is in position P**6**, people in vehicles **336**G and **336**H traveling in the traffic flow direction F1 can best see the advertising on display section **355** of billboard **348**, as illustrated at lines of sight S**7** and S**8**. In position P**6**, people in vehicles **336**J and **336**K traveling in the direction of traffic flow F2 and people in vehicle **336**L traveling in the direction of traffic flow F3 are best able to see the display section **355** of billboard **350**. Display sections **355** in position P**6** are thus at an angle of about 45° relative to either of roadways **338** and **340**, as well as relative to rails **202** and sides **230** and **232** of the railcar. In position P**5**, the display section **355** of billboard **348** is parallel to roadway **338** and its flow of traffic and perpendicular to roadway **340** and its flow of traffic while the display section **355** of billboard **350** is parallel to roadway **340** and its flow of traffic and perpendicular to roadway **338** and its flow of traffic. In position P**5**, display section **355** of billboard **348** is also parallel to rails **202** while display section **355** of billboard **350** is perpendicular to rails **202**.

Even though position P**4** is the traveling or transport position of billboard assembly **346**, advertising display section **355** of billboard **348** is parallel to and faces roadway **338** and may still be useful as an advertising display in this position, whether the railcar is parked or traveling along the railroad track. The display section **355** of billboard **350** in position P**4** may also be used for advertising depending on its location relative to the respective roadways and vehicles thereon.

The portable advertising systems of the present invention thus allow a railcar to be parked at any given location on a railroad track with a billboard thereon in order to display advertising to people in motor vehicles driving along roadways adjacent the railroad track. System **200** conveniently allows the billboard sign to be raised to a suitable height and to be rotated at a desired angle in order to take advantage of the specific circumstances including the angle at which the roadway runs relative to the railroad track as well as the flow of traffic along the roadway. System **200** also provides the ability to use a large advertising billboard at a display location along the railroad track such that the billboard exceeds the height limitations for railway vehicles during transport.

In the foregoing description, certain terms have been used for brevity, clearness, and understanding. No unnecessary limitations are to be implied therefrom beyond the requirement of the prior art because such terms are used for descriptive purposes and are intended to be broadly construed.

Moreover, the description and illustration of the invention is an example and the invention is not limited to the exact details shown or described.

The invention claimed is:

1. An advertising system for use on a railroad track, the system comprising:

a railcar having a deck area and track-engaging wheels adapted to roll on the railroad track;

an advertising billboard mounted on the railcar above the deck area;

a security fence which extends around the deck area to deter trespassers; and

at least one locking mechanism securing the fence to the railcar so that the fence cannot be removed from the

railcar without the use of a key configured to unlock the at least one locking mechanism.

2. The system of claim **1** wherein the fence comprises barbed wire, concertina wire or razor wire.

3. The system of claim **1** further comprising a support post within the fence; wherein the billboard is mounted on the railcar by the support post.

4. The system of claim **1** further comprising a lift within the fence which is operatively connected to the billboard for raising and lowering the billboard.

5. The system of claim **1** further comprising a drive mechanism within the fence which is operatively connected to the billboard to drive movement of the billboard.

6. The system of claim **1** further comprising a fuel tank within the fence.

7. The system of claim **1** further comprising a fuel powered engine within the fence.

8. The system of claim **1** further comprising an electric generator within the fence.

9. The system of claim **1** further comprising solar panels within the fence.

10. The system of claim **1** further comprising a hydraulic pump assembly within the fence.

11. The system of claim **1** further comprising a lighting assembly within the fence.

12. The system of claim **11** further comprising a control unit within the fence which is in communication with the lighting assembly and configured to control when the lighting assembly is turned on and off.

13. The system of claim **1** further comprising a lighting assembly positioned so that when illuminated, light emitted therefrom shines onto the billboard; and a control unit within the fence which is in communication with the lighting assembly and configured to control when the lighting assembly is turned on and off.

14. The system of claim **13** wherein the control unit comprises a timer and a light sensor for sensing the ambient light.

15. The system of claim **1** further comprising

a plurality of outriggers carried by the railcar and respectively movable between a raised travel position adapted allow the railcar to travel along the railroad track and a lowered stabilizing position adapted to stabilize the railcar when parked; and

a drive mechanism within the fence which is operatively connected to the outriggers to drive movement of the outriggers between their respective raised and lowered positions.

16. An advertising system for use on a railroad track, the system comprising:

a railcar having a deck area and track-engaging wheels adapted to roll on the railroad track;

an advertising billboard mounted on the railcar above the deck area;

a security fence which extends around the deck area to deter trespassers and comprises a plurality of fence posts removably mounted on the railcar; and

a plurality of locking mechanisms which respectively secure the posts to the railcar so that the fence posts cannot be removed from the railcar without the use of a key configured to unlock the respective locking mechanism.

17. The system of claim **16** wherein the fence comprises barbed wire, concertina wire or razor wire.

18. The system of claim **16** wherein the fence comprises wire strung between the fence posts.

19. A method comprising the steps of:

displaying advertising on a billboard above a deck area of a railcar on a railroad track;

deterring trespassers from gaining access to the deck area with a security fence which extends around the deck area; and

unlocking at least one locking mechanism with a key to allow at least a portion of the fence to be detached from the railcar.

20. The method of claim **19** wherein the step of unlocking comprises unlocking a plurality of locking mechanisms which respectively secure fence posts to the railcar to allow a plurality of the fence posts to be detached from the railcar.

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